

Amendments to the Specification:

Page 2, amend paragraph [0005] to read as follows:

[0001] FIG. 2 shows an example of an optical pattern inspection apparatus of the type in JP-A No. H11 (1999)-160247. In this conventional optical inspection apparatus, a light beam emitted ~~from~~ from a light source 21 is applied to an object substrate 5 under test through an objective lens 22, and light reflected from the object substrate 5 is detected by an image sensor 23. While a stage 6 is moved at a constant speed, detection of reflected light is repeated to produce a detected image 24. The detected image 24 thus produced is stored into a memory 25. In an image processing circuit 10, the detected image 24 is ~~compared~~ compared with a previously memorized reference image 27, which is expected to have a pattern identical to that of the detected image 24. If the pattern of the detected image is identical to that of the reference image 27, it is judged that there is no defect, on the object substrate 5. If these patterns are not identical to each other, a pattern defect 11 is recognized, and the location thereof is determined.

Page 3, amend paragraph [0006] to read as follows:

[0006] As an example, FIG. 3 shows a layout of a wafer 31 corresponding to the object substrate 5. On the wafer 31, there are formed ~~dice~~ dies 32 which are to be separated eventually as individual identical products. The stage 6 is moved along a scanning line 33 to detect images in a stripe region 34. In a situation where a detection position A 35 is currently taken, a pattern image attained at the detection position A 35 is compared with a pattern image attained at a detection position B 36 (reference pattern image 27), which has been stored in the memory 25. Thus, each pattern image is compared with a reference pattern image which is expected to be

identical thereto. In this arrangement, the memory 25 has a storage capacity sufficient for retaining reference pattern image data to be used for comparison, and the circuit structure of the memory 25 is designed to perform a circular-shift memory operation.

Page 4, amend paragraph [0008] to read as follows:

[0008] In JP-A No. S61(1986)-278706, there is disclosed an example of a technique for inspecting through-holes on a printed circuit board. In this inspection technique, a printed circuit board having through-holes only in a non-inspection region thereof is prepared beforehand, and an image of the printed circuit board is taken prior to inspection. A binary image indicating the presence/absence of through-holes is thus attained for masking, and it is stored as image data in a masking data storage. At the time-time of inspection, if a difference found in binary image comparison is located at a position included in a mask region stored in the masking data storage, the difference is ignored for non-inspection.

Page 9, amend paragraph [0023] to read as follows:

[0023] In accomplishing this object of the present invention, and according to one aspect thereof, there is provided a pattern inspection apparatus such as shown in FIG. 4. While an exemplary configuration of an electron-beam pattern inspection apparatus is presented here, an optical pattern inspection apparatus can be configured in the same-same fashion in principle. The electron-beam pattern inspection apparatus shown in FIG. 4 comprises an electron source 1 for emitting an electron beam 2, a deflector 3 for deflecting the electron beam 2, an objective lens 4 for converging the electron beam 2 onto an object substrate 5 under test, a stage 6

for bolding holding the object substrate 5 and for scanning/positioning the object substrate 5, and a detector 8 for detecting secondary electrons 7 or the like produced from the object substrate 5 to output a detected analog signal. An A/D converter 9 converts the detected analog signal into a digital image, and an image processor circuit 10 compares the converted digital image with a reference digital image expected to be identical thereto and identifies a difference found in comparison as a candidate defect 40. A candidate defect memory part 41 is provided for storing feature quantity data of each candidate defect 40, such as coordinate data, projection length data and shape data, and a mask setting part 44 examines pattern defects 11 stored in the candidate defect memory part 41 and flags a candidate defect located in a mask region 42 (shown in FIG. 5), prespecified with coordinates, as a masked defect 43 (shown in FIG. 5). An operation display 45 is provided on which data of pattern defects 11 received from the mask setting part 44 is displayed, an image of a selected pattern defect 11 is displayed, and the mask region 42 is displayed or edited.

Page 11, amend paragraph [0025] to read as follows:

[0025] On the object, substrate 5, there is an area where a considerable difference is found in comparative inspection of patterns, even if the difference is not actually a defect, such as a region 50 where ions have been implanted. In actual practice, during ion implantation, ions are likely to be implanted in a deviated fashion, i.e., a deviated ion-implanted part 52 is formed in addition to normal ion-implanted pattern parts 51. The deviated ion-implanted part 52 has no adverse effect on device characteristics, i.e., the deviated ion-implanted part 52 should be judged to be non-defective. However, the deviated ion-implanted part 52 is detected as a pattern

defect 11. Therefore, an area including the ion-implanted region 50 is set up as a mask region 42, and a possible defect in the mask region 42 is treated as a masked defect 43. Since the sane-same die pattern is formed repetitively on the wafer 31 shown in FIG. 3, on-die coordinates are used in region recognition. Parts, having the same coordinates on different dice-dies are regarded as identical, and if in-die coordinates of a part are included in a specified region, it is regarded that the part is included in the specified region. For the wafer 31, beam shots are also characterized by repetitiveness besides-dice-dies. Each shot is a unit of beam exposure in a pattern exposure system used for semiconductor device fabrication. For identifying some kinds of false defects to be precluded in pattern inspection, the use of shots may be more suitable than that of dice-dies with respect to pattern repetitiveness. Although the following description handles dice-dies, it will be obvious to those skilled in the art that shots are applicable in lieu of dice-dies and that an arrangement may be provided for allowing a changeover between shots and dice-dies.

Page 13, amend paragraph [0028] to read as follows:

[0028] After completion of the defect classification mentioned above, the user selects an operation display screen shown in FIG. 7, which comprises a map display part 55 for presenting an enlarged map including true defects 57, false defects 58 not to be detected and a current position indicator 59, and an image display part 56 for presenting an image corresponding to the current position indicator 59. On the map display part 55, the user can specify a mask region 42 and check a position of each pattern defect 11. With reference to classification information on each pattern defect 11 and the image corresponding to the current position indicator 59, the user sets up coordinates of a mask region 42 so that the false defects 58 will not be

detected. As required, the user carries out the conditioning operation again to set up
the coordinates of the mask region 42 ~~note~~ more accurately.